APPENDIX M

SOCIOECONOMIC METHOD AND APPROACH

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Approach

The general approach to the description of socioeconomic impacts is to consider the potential for change that may result from the proposed action. These changes represent the social consequences of the project. For the construction of the proposed dam and reservoir, these changes may involve:

- the customary business practices of the local community;
- employment opportunities and the incomes of local residents;
- the value, or cost, of natural resources, including land and property used for housing, business, recreation, or other purposes;
- the built environment, consisting of man-made structures such as housing, commercial structures, factories, and industries, or other structures used for recreational or cultural purposes, such as churches, schools, and community centers;
- the characteristics of the community and its members, such as size, age, diversity, educational level, and other important characteristics of the population;
- the availability and cost of social services and resources;
- the general setting and character of the community; and
- the ways of life that are valued as important components of a community's identity.

The analysis is primarily concerned with the relationship of the proposed project to each of these aspects of social life within the community. The potential socioeconomic effect of the proposed alternatives on the affected communities is evaluated through the use of a comparative method (Burdge, 1995; ICGPSA, 1995). Assessment of impacts is based on the significance criteria established in Appendix C of this EIS.

Specific characteristics of the project, such as the duration of construction activity, the total land area affected, and the number and types of jobs involved are important sources of potential impact on the social community. Consequential changes in the employment, income, and tax revenue base of the community may be anticipated as new business and job opportunities are created and land is removed from the productive tax base. Capital expenditures for project-related materials, employment and land acquisition, as well as the physical alteration of the community setting, are also important sources of potential change.

Identification of Socioeconomic Impact Elements

In order to determine the potential socioeconomic impacts of the proposed action, it is necessary to identify a set of impact assessment variables that represent some observable change in the economic system, human population, community structure, or social relationships that may result from the proposed action (ICGPSA, 1995). These observable changes are called indicators. They are logically connected to activities under the proposed action and represent primary and direct effects of the proposed action on the community.

Three areas of consideration are important in determining which indicators should be used to assess the socioeconomic impacts of the proposed action. These are:

1. The potential for economic change within the local community;
2. The potential for social change as a result of residential relocations from the project area or from the future development associated with the new resource; and
3. The physical alteration of the community setting.

Business and the Local Economy

The purpose of the assessment of potential economic effects is to estimate any changes in employment, income, and levels of business activity that may result from proposed action (Leistritz, 1994). Direct effects are those immediately attributable to the project itself, such as additional employment, capital expenditure in the region, or the acquisition of land by easement or fee title purchase. Indirect consequences include such changes as interruption or alteration of business activity, changes in employment, or changes in the regional supply/demand relationships. Two primary circuits of capital are important. One circuit involves the circulation of capital into and out of the production/consumption cycle. The other circuit involves capital investment in land and infrastructure (Gottdiener, 1994).

Local industry, and therefore, employment and income may be affected thorough the expenditure of project funds, hiring of local residents for project-related work, or by noise, visual, or other impacts that interrupt economic activity. To the extent that money is spent in the local community in support of the proposed action, the local trade and service sector of the economy can be expected to experience some direct and indirect increase in employment or additional income from sales of products and services.

The Multiplier Effect

This cycle of spending and re-spending is the basis of an economy's multiplier effect and is predicated on the assumption that an increase in external activity (i.e., sales generating income from outside the community, in this case, in the form of contract expenditures) will create a corresponding and amplified economic effect within the community. With each new round of spending, a portion of each dollar "leaks" out of the local economy in the form of taxes, savings, insurance, or the purchase of products and services that are not available within the local community. Therefore, with each new round of expenditure only a portion of the original dollar is re-spent within the local community. This process is represented by the use of a multiplier, a number that represents the total value of a single dollar when expended in multiple rounds of economic activity until all of the original dollar has been lost or "leaked" out of the local economy. Holland (1994) suggests a probable range of average multiplier values based on data for 375 Appalachian counties. Appropriate to the size of the regional economy represented for this analysis, a multiplier of 2.2 has been selected to provide an estimate of the value of potential project expenditures within the region over time.

Community resources flow very quickly from communities where there are limited institutions and resources to meet the requirements of local residents (LaMore et al., 1995). However, the

portion of each dollar that is re-spent within the community has a cumulative effect so that with multiple rounds of expenditure, the amplified effect of the original dollar is experienced. Indirect effects may include the creation or expansion of local businesses or the creation of secondary or indirect employment as a function of direct expenditure and employment.

Natural Capital Assets

Natural capital, defined economically, refers to the stock of environmentally provided assets, such as land, soil, forests, minerals, water, fauna, and wetland areas, that represent the raw input materials or consumable products of human production. Important are both the quantity and condition of natural capital resources. In addition to their utility value, these assets also represent a source of investment income to the current owner and a source of future investment in the community by outside sources.

Infrastructure and Community Resources

Socioeconomic impacts are usually limited to measurable changes in employment, housing, and demographic characteristics. However, the characteristics of the proposed project may also have the potential to impair or disrupt the local community through changes in the built environment, infrastructure, or other resources important to the local community. These changes, either beneficial or adverse, could substantially alter the perception of the quality of life available in the community following implementation of the project.

Built Environment

Changes to the built environment may result from the removal or relocation of structures located in the impoundment area. The loss of a structure has the potential to disrupt the social life of the community. Apart from direct project-related activities, the effect of a change in the built environment is also influenced by the physical characteristics of the community, the presence of informal support structures and mechanisms, the current value and age of the built environment, and considerations of existing vacancy rates in the local community.

Community Structure and Social Patterns

The determination of the potential effect of the project on the character and social structure of the local community depends on consideration of potential changes in a number of social characteristics. Community factors that may be considered important are the extent to which people's interests are served by the project, the extent of the community's knowledge of the proposed project, and its expectation of the final outcome (Ludtke and Burdge, 1970). Project-related effects may include changes in the population and demographic makeup of the local community, or the breakup or isolation of specific neighborhoods, affecting the sense of community and disrupting important networks that support local residents. Also important is the potential to disrupt historic or established neighborhoods within the community, or unique residential networks or communities (Canter, 1977).

Demographic Changes

Population related consequences of the proposed project may include changes in the size, age, racial and ethnic composition, poverty and income levels, or residence patterns of the community. These changes may indirectly influence other aspects of social life, including the community setting and character, the size and structure of local government services, the availability of housing and community services, and the patterns of natural resource use. Consequential changes in the patterns of interaction of local residents can also be anticipated (Gramling and Freudenburg, 1992). Of particular interest is the presence of sensitive populations in the immediate project area. **Table M-1** provides statistics for Jackson County and its surrounding region, and provides more detailed information about the community.

Table M-1. Socioeconomic Characterization of the Eight-County Region of Influence									
Characteristic	**County**								
	Jackson	**Clay**	**Estill**	**Laurel**	**Lee**	**Madison**	**Owsley**	**Rockcastle**	**Region**
Largest Cities (1995 Population)	McKee (975)	Manchester (1,802)	Irvine (2,973)	London (6,640)	Beattyville (1,564)	Richmond (25,354)	Booneville (238)	Mt. Vernon (2,605)	N/A
1990 Population	11,955	21,747	14,614	43,438	7,422	57,508	5,036	14,803	176,523
1996 Population [1] (% change from '90)	12,832 (7.34)	22,736 (4.6)	15,494 (6.0)	49,185 (13.2)	7,906 (6.52)	64,297 (11.81)	5,481 (8.84)	15,627 (5.57)	193,558 (9.6)
% Rural Population	100	100	80.7	86.7	100	47.3	100	82.1	N/A
% At or Below Poverty	38.2	40.2	29.0	24.8	37.4	21.2	52.1	30.7	N/A
% Minority [2]	0.2	1.9	0.1	1.1	0.5	6.3	0.4	0.3	N/A
Area (sq. mi.)	346	471	254	436	210	441	198	318	2674
Farm Acreage	84,471	74,381	68,915	102,078	23,097	245,581	34,811	95,336	728,670
1990 % Unemployed	12.4	14.2	13.7	9.6	14.1	7.5	17.2	12.2	N/A
Per Capita Income	$7,097	$6,804	$7,474	$8,879	$6,869	$10,029	$5,791	$7,630	N/A
Households									
Total	4,381	7,367	5,357	15,585	2,760	20,012	1,848	5,464	62,774
Median Income	$11,885	$12,732	$16,056	$18,584	$12,461	$21,388	$8,595	$14,967	N/A
Average # Persons Per [3]	2.71	2.93	2.71	2.75	2.65	2.56	2.67	2.68	N/A
Housing Units									
Total (% growth since '80)	4,895 (12.1)	7,930 (7.1)	5,863 (11.7)	16,923 (19.6)	3,025 (8.1)	21,456 (19.4)	2,137 (4.8)	5,958 (18.3)	68,187 (N/A)
Priv. or pub. water sys. (% of all households)	2,700 (55.2)	3,507 (44.2)	4,462 (76.1)	15,065 (89.0)	1,869 (61.8)	19,804 (92.3)	1,136 (53.2)	4,280 (71.8)	52,823 (77.5)
Median Year Built [3]	1970	1973	1969	1975	1972	1972	1970	1970	N/A
Median Value [3]	$26,900	$27,800	$30,400	$46,900	$28,400	$55,500	$24,400	$31,100	N/A
Moved into house prior to '80 [3] (% households)	1,893 (43.2)	2,994 (40.6)	2,397 (44.7)	5,645 (36.2)	1,110 (40.2)	6,135 (30.5)	850 (45.9)	2,304 (42.1)	23,328 (37.2)

Source: Unless otherwise noted, all data are from USBC, 1994.
Notes: [1] USBS, 1996. [2] Population includes only non-white portions of Hispanic Populations [3] USBC, 1992.

Social Patterns

A high level of social cohesiveness often characterizes smaller rural communities. Cohesion in this sense refers to the forces or attractions that hold members of a community together, and is based on the quality of social life within the community. Anything that may decrease the desirability of the community itself or the desirability of associating with or identifying with the community may have a detrimental effect on the level of cohesion and the corresponding sense of community (Finsterbusch, 1980). Local change, the loss of stability, or a sense of traditional identity can significantly affect this level of cohesion, especially in small, traditional, rural communities. The potential for relocation of substantial segments of the population, therefore, represents a potentially significant disruption to local community life. Land acquisition may disrupt social networks for any families that may be relocated and for those that remain in the affected area. Burdge (1987) found that the resiliency of large family-based communities was lost when the families that comprised the community lost land or were forced to relocate.

Socioeconomic Characteristics of Rural Communities

Several important characteristics of the communities directly affected are important to the description of the potential impact of the project. In recent years, rural communities have undergone what is frequently characterized as an economic restructuring (Reeder, 1990). One result of this restructuring process has been an increasing difficulty in maintaining the current residential and employment base, as well as in attracting new residents or business investment to the community. These communities have also experienced a drop in per capita income during the past two decades. As Leistritz (1994) notes, this significant loss of purchasing power through out-migration, and a general decline in employment opportunity resulting from productivity increases in primary sector industries such as agriculture and manufacturing, have reduced the ability of the communities to mobilize residents and resources to address critical problems.

Rural communities also tend to be characterized by social and lifestyle patterns that are distinct from their metropolitan counterparts. The predominately rural character of the communities under study indicates that, in addition to population, employment and economic effects, factors such as community history and social characteristics may also be important in the identification of potential impacts. The social environment of rural communities includes important emphasis on a sense of place and togetherness. Residents of rural communities tend to have deeper attachments to the community and to individual places within the community.

In contrast to more metropolitan communities, rural areas tend to be characterized by few people living in an area, with limited access to large cities or, in some cases, small towns, and considerable travel distance to centers of employment or market activity (Hewitt, 1989). Correspondingly, rural government structures are generally smaller than their urban counterparts, and have smaller financial resources, per capita, to address local problems (Reeder, 1990). The institutional and administrative structures of rural communities are, therefore, more susceptible to changes in local conditions.